

# **Clients Assigned to the Rethinking Care Program Intervention: How Do Clients Who Started an Assessment Differ from Those Who Did Not?**

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## **ABSTRACT**

Rethinking Care (RTC) is a program funded by the Washington State Health and Recovery Services Administration with the purpose of improving the quality of medical care and reducing medical care expenditures for Supplemental Security Income recipients with co-occurring medical and mental health or substance abuse problems. The purpose of the analysis summarized in this report is to examine how clients who started an assessment differed from those who did not, an analysis conducted with 406 RTC clients who were randomized to the RTC intervention in February and March 2009. The analysis showed that assessed clients were more likely to receive home-based services from the Aging and Disability Services Administration (ADSA), to be female, and to receive medications for insomnia. In addition, they were less likely to receive medications for infections. Clients receiving home-based services from ADSA may have been more likely to start an assessment because they were already closely tied to a system of services and possibly more open to another service.

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## I. Introduction and Overview

Rethinking Care (RTC) is a program funded by the Washington State Health and Recovery Services Administration (HRSA) within the state Department of Social and Health Services (DSHS). Its purpose is to improve the quality of medical care and reduce medical care expenditures for Supplemental Security Income recipients with co-occurring medical and mental health or substance abuse problems. The RTC Program is implemented in collaboration with King County Care Partners (KCCP) and the Center for Healthcare Strategies (CHCS).

The RTC Program is being carried out as a randomized controlled trial to allow a rigorous evaluation of its impact. Approximately 1,560 eligible individuals are expected to be randomly assigned to either the RTC intervention or to a treatment-as-usual abeyance group over a two-year period beginning February 1, 2009. In a previous intervention conducted by DSHS and KCCP, only 18% of the clients offered an opportunity to participate in chronic care management actually participated.<sup>1</sup> Thus, previous experience suggests that it can be difficult to recruit and/or engage clients in care management. To date, little is known about factors that influence engagement. The purpose of the present analysis was to examine whether client characteristics are related to participation in the RTC Program. Ascertaining characteristics of individuals who started the assessment process may help with identifying clients who are more likely to participate in future care management efforts. For the purpose of this analysis, we defined “participation” as whether an assessment was started, that is, whether there was an entry in the KCCP assessment database. The analysis was conducted with RTC clients who were randomized to the intervention in February and March 2009. This report summarizes the results of this analysis.

## II. Method

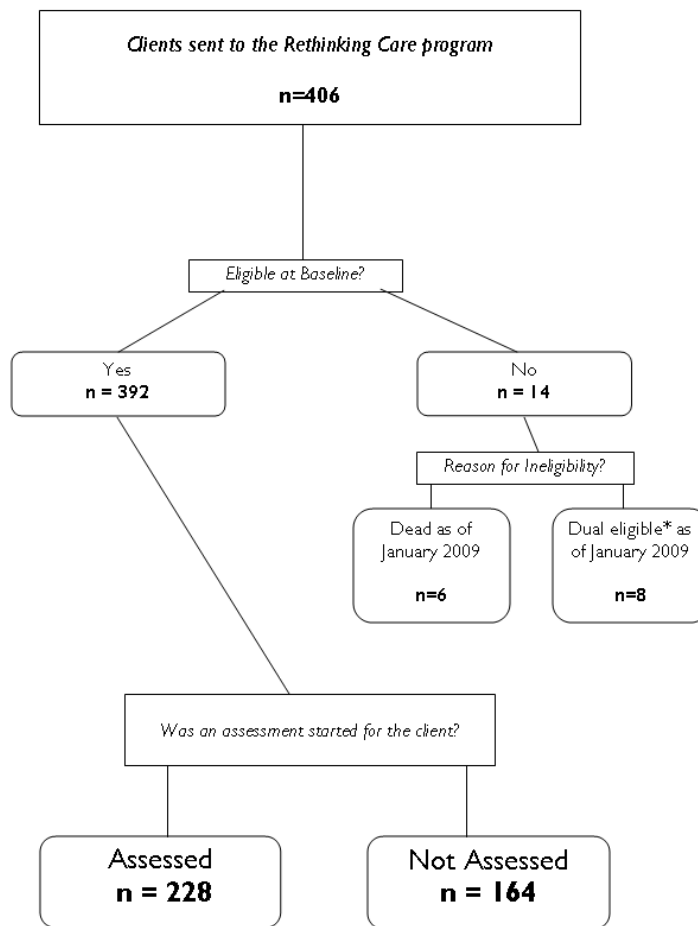
### *Clients*

In February and March 2009, 406 clients were randomized to the RTC intervention; 392 of these clients (97%) were eligible for an assessment. The remaining 14 clients were ineligible either because they had died (n=6), or because they were retroactively determined to be on Medicaid **and** Medicare (i.e., ‘dual eligibles’) as of January 2009 (n=8). Clients with dual eligibility are ineligible for RTC because it is not possible to access their Medicare medical records. According to the KCCP assessment data, 58% of the 392 clients began an assessment and 42% of clients did not (see Figure 1). A client was considered to have started the assessment if at least one section of the assessment database contained a response (see Appendix B for the assessment instrument). The clients who began an assessment were compared to the clients who did not begin an assessment on a number of demographic and health-related characteristics.

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<sup>1</sup> Court, B. & Mancuso, D. (2008). *King County Care Partners Chronic Care Management project: Savings/cost analysis*. Olympia, WA: Washington State Department of Social and Health Services, Health and Recovery Services Administration.

**Figure 1. RTC Client Participation**



\*Dual eligible means the client was on Medicaid and Medicare as of January 2009

### **Sources of data**

The comparison is based on two data sources: (1) assessment data obtained from the KCCP Database; and (2) a rich set of data from the Research and Data Analysis (RDA) Divisions' Client Outcomes Database<sup>2</sup> (CODB). The CODB data were extracted from state records for each client for February 2008 – January 2009, the baseline period. The CODB data are comprised of information from a variety of sources, including:

- The Medicaid Management Information System (MMIS), DSHS/HRSA
- The Treatment and Assessment Report Generation Tool (TARGET) data base, Division of Behavioral Health and Recovery Services (DBHR)
- The Automated Client Eligibility System (ACES), Economic Services Administration

<sup>2</sup> Washington State Department of Social and Health Services Research and Data Analysis Division. (2009). *Integrated Client Database* (11.144). Olympia, WA: Author.

### Analyses

To compare the group of assessed versus non-assessed clients, multiple bivariate comparisons between assessed and non-assessed clients were conducted with data obtained from the CODB and KCCP assessment data files. The resulting proportions and means are displayed in Appendix A. When multiple comparisons are carried out, statistical significance may be found by chance alone. Thus, significant bivariate comparisons should be interpreted with caution.

To address the issue of multiple comparisons, we conducted a multivariate logistic regression to determine which of the demographic and health-related characteristics were associated with membership in the assessed versus non-assessed subgroups. For the logistic regression, we reduced the large universe of CODB data elements to 34 non-redundant characteristics.

## III. Results

Bivariate comparisons of assessment status resulted in few significant associations with demographic and health-related characteristics. Clients who started an assessment were more likely to be female ( $p < .01$  - see Appendix A for detailed results), to use home-based services from the Aging and Disability Services Administration (ADSA) ( $p < .003$ ), to have higher home-based ADSA service costs ( $p < .007$ ), and lower costs for inpatient hospitalizations ( $p < .035$ ) and residential alcohol and drug treatment ( $p < .03$ ). Assessed clients were also more likely to receive prescriptions for asthma or Chronic Obstructive Pulmonary Disease ( $p < .046$ ), diabetes ( $p < .041$ ), gastric acid disease ( $p < .017$ ), insomnia ( $p < .006$ ), and psychotic illness ( $p < .049$ ). Clients who received prescriptions for osteoporosis ( $p < .036$ ), irrigating solutions ( $p < .005$ ), and medium-level infections ( $p < .021$ ) were less likely to start an assessment.

Results of the logistic regression indicate that starting an assessment was significantly associated with four characteristics: gender, prescription medications for insomnia and infections, and utilization of home-based services from ADSA. Women were more likely to start an assessment (OR = 1.77; 95% CI: 1.05, 2.97), as were clients who received prescription medication for insomnia (OR = 2.97; 95% CI: 1.36, 6.50) and clients who received home-based ADSA services (OR = 2.49; 95% CI: 1.31, 4.73). Assessed clients were less likely to receive prescription medication for infections (OR = .48; 95% CI: 0.24, 0.95). A summary of the regression results is shown in Table I.

Table I. Odds ratios for selected client characteristics, n= 390§

Characteristic	Odds Ratio	95% confidence interval
Gender – Female	1.77	(1.05, 2.97) †
Race – Black	0.99	(0.48, 2.08)
Race – White	0.69	(0.35, 1.37)
Age	1.00	(0.97, 1.02)
Interpreter needed	1.14	(0.44, 2.93)
Ever homeless	0.92	(0.49, 1.71)

Alcohol or drug (AOD) treatment needed	1.35	(0.72, 2.53)
Medical risk score	0.98	(0.83, 1.15)
Anticoagulant prescription	0.61	(0.31, 1.22)
Asthma prescription	1.25	(0.76, 2.05)
Cardiac prescription	0.98	(0.56, 1.71)
Depression or Anxiety prescription	1.02	(0.51, 2.04)
Diabetes prescription	1.45	(0.86, 2.46)
Ears, Eyes, Nose and Throat prescription	0.74	(0.44, 1.23)
End stage renal disease prescription	0.50	(0.24, 1.06)
Folate deficiency prescription	1.02	(0.47, 2.22)
Gastric acid disorder prescription	1.54	(0.94, 2.53)
Hyperlipidemia prescription	0.98	(0.56, 1.69)
Infections prescription *	0.48	(0.24, 0.95) †
Inflammatory or Autoimmune prescription	1.13	(0.66, 1.93)
Insomnia prescription	2.97	(1.36, 6.50) †
Iron deficiency prescription	1.06	(0.55, 2.03)
Multiple Sclerosis or Paralysis prescription	1.03	(0.62, 1.71)
Nausea prescription	0.95	(0.56, 1.62)
Neurogenic Bladder prescription	0.71	(0.35, 1.46)
Pain prescription	1.00	(0.54, 1.85)
Parkinsons prescription	0.83	(0.36, 1.91)
Psychotic illness or Bipolar prescription	1.47	(0.87, 2.49)
Seizure disorder prescription	1.27	(0.79, 2.05)
Thyroid disorder prescription	1.47	(0.65, 3.32)
ADSA in-home services	2.49	(1.31, 4.73) †
ADSA community residential services	2.05	(0.82, 5.15)
Alcohol or drug (AOD) treatment utilization	0.74	(0.38, 1.45)
Emergency room utilization	1.15	(0.69, 1.92)
Inpatient hospital utilization	0.65	(0.39, 1.10)

§ Two clients were missing data for race and were not included in the regression.

† Denotes significance at  $p < 0.05$

\* Infection prescriptions include prescriptions based on the following Medicaid Rx categories: Infections (High, Medium, and Low), Hepatitis, Herpes, HIV, Pneumonia, and Tuberculosis.

## IV. Discussion

Clients randomized to the RTC intervention are expected to be assessed. When the data for the current analysis were obtained, 58% of RTC intervention clients had started an assessment. This is a notable improvement over an earlier intervention sponsored by HRSA when only 18% of clients participated in an assessment<sup>3</sup>. However, for at least two reasons, the 58% may be an underestimate. One, assessments are ongoing. Thus, additional clients may have started an assessment after KCCP provided data for the present analysis. Two, while clients were excluded from the analysis who had either died or lost eligibility due to Medicare participation, additional clients may have lost eligibility. Examples include moving out of the service area or changes in income that we were not able to address due to a lack of data. If clients who became ineligible are included in the group of non-assessed clients, the analysis underestimates the percent that began an assessment as part of the RTC program.

The analysis reported here can be viewed as a stepping stone towards understanding why a client started an assessment with a focus on demographic and health-related client characteristics. Significant characteristics of whether a client was **more likely** to start an assessment were gender, receipt of in-home services from ADSA, and receipt of medications for insomnia. Two of these three characteristics, gender and receipt of ADSA in-home services, may provide some insight into why an assessment was started for some clients and not for others. In particular, a client receiving home-based services from ADSA may have been more likely to start an assessment because they were already closely tied to a system of services and possibly more inclined to participate in another service. The positive association with gender may reflect that women are more likely to participate in health care than men.

A significant characteristic of whether a client was **less likely** to start an assessment was receipt of medications for infections. It is possible that clients who received such prescriptions may have been sicker than those who were not receiving such prescriptions and, as such, less available for an assessment. However, this conclusion is speculative. Further analyses may help address the role this characteristic plays in client assessment.

It is well known that it is difficult to engage and retain clients with co-morbid medical and mental illnesses in chronic care management. Thus, identifying client characteristics that are associated with beginning an assessment – the scope of the present analysis – is useful to inform future program implementation and planning. However, it is important to recognize that beginning the assessment is only one step in the RTC Program. There was, for instance, considerable variability in the time between KCCP receiving the names of clients to be contacted for the RTC program and when the client was actually contacted – in some cases up to a year. Therefore, a useful topic for future research would be to identify at each step of the process factors that contribute to full participation in the RTC Program. In particular, it would be helpful to identify factors that predict each of the following steps:

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<sup>3</sup> Court, B. & Mancuso, D. (2008). *King County Care Partners Chronic Care Management project: Savings/cost analysis*. Olympia, WA: Washington State Department of Social and Health Services, Health and Recovery Services Administration.

- Which clients were contacted
- Which clients agreed to participate after being contacted
- Which clients who agreed to participate agreed to have an assessment
- Which clients started the assessment
- Which clients completed the assessment
- Which clients completed one or more of their healthcare goals.

Results of such analyses would enrich the information contained in the present report and, as such, have greater potential for informing the RTC Program as well as future chronic care management efforts. The more insights the RTC Program can gain with respect to successful client recruitment and retention in chronic care management, the more effective the program can be.

## **V. Limitations**

As described above, the analysis presented here has a number of limitations. First, we were able to exclude clients from the analysis who had either died or lost eligibility due to Medicare participation. However, there are additional reasons why a client may have lost eligibility that we were not able to address due to a lack of data (e.g., moving out of the service area, income change). If clients who became ineligible are included in the group of non-assessed clients, the analysis underestimates the percent of clients who began an assessment as part of the RTC program.

Second, there was considerable variability in the time when KCCP received the names of clients to be contacted for the RTC program and when the client was actually contacted - up to a year. Thus, whether a client began an assessment could also have been influenced by the time it took to be contacted by KCCP. This factor would be an important area for future investigation.



## Appendix A: RTC Client Comparison Tables and References

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**Table 1. Demographic characteristics as of January 2009 by assessment status, n = 392**

Characteristic	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>2,3</sup>
	n (%) <sup>1</sup>	n (%) <sup>1</sup>	
Eligibility type			
Aged	9 (4)	11 (7)	.22
Disabled or blind	219 (96)	153 (93)	
Gender			
Male	90 (39)	86 (52)	.01 <sup>3,4</sup>
Female	138 (61)	78 (48)	
Race			
American Indian	9 (4)	5 (3)	.47 <sup>4</sup>
Asian	13 (6)	6 (4)	
Black	71 (31)	43 (27)	
Hispanic	11 (5)	8 (5)	
Other	5 (2)	2 (1)	
White/ Caucasian	119 (52)	98 (60)	
No information	0 (0)	2 (1)	
Primary language			
English	200 (88)	150 (91)	.24
Other <sup>5</sup>	28 (12)	14 (9)	
Interpreter use			
Interpreter needed	23 (10)	10 (6)	.16
No interpreter needed	205 (90)	154 (94)	
Hearing impairment			
Hearing impaired	1 (<1)	1 (1)	.49 <sup>4</sup>
Not hearing impaired	227 (100)	163 (99)	
County of residence			
King	227 (100)	164 (100)	.58 <sup>4</sup>
Other <sup>6</sup>	1 (< 1)	0 (0)	
Age			
Mean (SD)	50 (9)	51 (12)	.67 <sup>7</sup>
Median	51	52	
Minimum	22	24	
Maximum	85	85	

<sup>1</sup> Percentages may not sum to 100 due to rounding<sup>2</sup> p value calculated using chi-square test unless noted; df (degrees of freedom)=1<sup>3</sup> Denotes significance at p < 0.05<sup>4</sup> p value calculated using Fisher's exact test<sup>5</sup> Other languages includes Amharic, Cambodian (Khmer), Chinese, Farsi, Laotian, Oromo, Romanian, Russian, Serbo-Croatian, Somali, Spanish, Tagalog, and Vietnamese<sup>6</sup> Other county of residence is Snohomish<sup>7</sup> p value calculated using t test; df (degrees of freedom) = 305.31

**Table 2. Homeless status during baseline<sup>1</sup> by assessment status, n = 392**

<i>Homeless Categories</i>	<i>Assessed (n = 228)</i>	<i>Not Assessed (n = 164)</i>	<i>p Value<sup>3</sup></i>
	<i>n (%)<sup>2</sup></i>	<i>n (%)<sup>2</sup></i>	
Homeless status			
Ever homeless	36 (16)	31 (19)	.42
Never homeless	192 (84)	133 (81)	
Homeless categories			
Living in a Battered Spouse Shelter	0 (0)	0 (0)	n/a
Living in a Emergency Housing Shelter	1 (<1)	0 (0)	.58 <sup>4</sup>
Homeless with Housing	20 (9)	24 (15)	.07
Homeless without Housing	7 (3)	4 (2)	.23 <sup>4</sup>
Homeless without Housing in Shelter Expenses	0 (0)	0 (0)	n/a
Living in an Inappropriate Living Situation without Housing	0 (0)	0 (0)	n/a
Paying Nominal Rent in a Shelter	13 (6)	4 (2)	.06 <sup>4</sup>

<sup>1</sup> February 2008 through January 2009<sup>2</sup> Percentages may not sum to 100 due to rounding<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom)= 1<sup>4</sup> p value calculated using Fisher's exact test<sup>5</sup> n/a = not applicable

**Table 3. Diagnosis and substance use characteristics during baseline<sup>1</sup> by assessment status, n = 392**

Characteristic	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3</sup>
	n (%) <sup>2</sup>	n (%) <sup>2</sup>	
Alcohol or drug treatment			
Needed treatment	100 (44)	79 (48)	.40
Did not need treatment	128 (56)	85 (52)	
Adjustment and Stress disorder <sup>4</sup>			
Yes	53 (23)	42 (26)	.59
No	175 (77)	122 (74)	
Depression <sup>4</sup>			
Yes	97 (43)	66 (40)	.65
No	131 (57)	98 (60)	
Mania and Bipolar disorder <sup>4</sup>			
Yes	41 (18)	33 (20)	.59
No	187 (82)	131 (80)	
Neurotic disorder <sup>4</sup>			
Yes	38 (17)	27 (16)	.96
No	190 (83)	137 (84)	
Psychotic disorder <sup>4</sup>			
Yes	57 (25)	43 (26)	.78
No	171 (75)	121 (74)	
Number of mental health diagnoses			
Mean (SD)	1.25 (1.22)	1.29 (1.23)	.79 <sup>5</sup>
Median	1	1	
Minimum	0	0	
Maximum	5	5	
Medical risk score <sup>6</sup>			
Mean (SD)	2.49 (1.62)	2.59 (1.52)	.61 <sup>5</sup>
Median	2.15	2.17	
Minimum	0.44	0.48	
Maximum	16.41	9.53	

<sup>1</sup> February 2008 through January 2009<sup>2</sup> Percentages may not sum to 100 due to rounding<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom) = 1<sup>4</sup> See Appendix A1 for mental health disorder definitions<sup>5</sup> p value calculated using Wilcoxon-Mann-Whitney test<sup>6</sup> The medical risk score is computed at baseline (January 2009). It is based on Chronic Illness and Disability System (CDPS) and Medicaid Rx risk group scores. A lower score reflects lower cost medical conditions. See Appendix A1 for additional information.

**Table 4. Chronic Illness and Disability Payment System (CDPS) characteristics, CDPS categories A-E<sup>1</sup>, by assessment status for the period February 2008 through January 2009, n = 392**

CDPS Category <sup>2</sup>	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3,4</sup>
	n (%)	n (%)	
Cancer			
High	12 (5)	3 (8)	.28
Medium	6 (3)	7 (4)	.37
Low	4 (2)	2 (1)	.30 <sup>5</sup>
Cardiovascular			
Very High	2 (1)	5 (3)	.09 <sup>5</sup>
Medium	46 (20)	30 (18)	.64
Low	89 (39)	74 (45)	.23
Extra Low	107 (47)	66 (40)	.19
Central Nervous System			
High	2 (1)	5 (3)	.09 <sup>5</sup>
Medium	25 (11)	23 (14)	.36
Low	129 (57)	92 (56)	.92
Cerebrovascular			
Low	32 (14)	29 (18)	.33
Developmental Disability			
Medium	0 (0)	4 (2)	.03 <sup>4,5</sup>
Low	3 (1)	4 (2)	.21 <sup>5</sup>
Diabetes			
Type I, High	0 (0)	1 (1)	.42 <sup>5</sup>
Type I, Medium	32 (14)	18 (11)	.37
Type II, Medium	24 (11)	16 (10)	.80
Type II, Low	82 (36)	48 (29)	.16
Eye			
Low	4 (2)	6 (4)	.24 <sup>5</sup>
Very Low	33 (14)	20 (12)	.52

<sup>1</sup> See Appendix A2 for information regarding CDPS categories

<sup>2</sup> CDPS categories are not mutually exclusive

<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom) = 1.

<sup>4</sup> Denotes significance at  $p < 0.05$

<sup>5</sup> p value calculated using Fisher's exact test

**Table 5. Chronic Illness and Disability Payment System (CDPS) characteristics, CDPS categories G-O<sup>1</sup>, by assessment status for the period February 2008 through January 2009, n = 392**

CDPS Category <sup>2</sup>	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3</sup>
	n (%)	n (%)	
Genital			
Low	28 (12)	11 (7)	.07
Gastrointestinal			
High	16 (7)	7 (4)	.25
Medium	56 (25)	42 (26)	.81
Low	110 (48)	75 (46)	.62
Hematological			
Extra High	2 (1)	0 (0)	.34 <sup>4</sup>
Very High	1 (<1)	0 (0)	.58 <sup>4</sup>
Medium	14 (6)	7 (4)	.42
Low	31 (14)	24 (15)	.77
Infectious			
AIDS, High	2 (1)	0 (0)	.34 <sup>4</sup>
Infectious, High	1 (<1)	0 (0)	.58 <sup>4</sup>
HIV, Medium	0 (0)	0 (0)	n/a
Infectious, Medium	7 (3)	11 (7)	.09
Infectious, Low	18 (8)	18 (11)	.30
Metabolic			
High	35 (15)	34 (21)	.17
Medium	28 (12)	16 (10)	.43
Very Low	40 (18)	33 (20)	.52

<sup>1</sup> See Appendix A2 for information regarding CDPS categories

<sup>2</sup> CDPS categories are not mutually exclusive

<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom) = 1.

<sup>4</sup> p value calculated using Fisher's exact test

<sup>5</sup> n/a = not applicable

**Table 6. Chronic Illness and Disability Payment System (CDPS) characteristics, CDPS categories P-Z<sup>1</sup>, by assessment status for the period February 2008 through January 2009, n = 392**

CDPS Category <sup>2</sup>	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3,4</sup>
	n (%)	n (%)	
Psychiatric			
High	46 (20)	37 (23)	.57
Medium	28 (12)	17 (10)	.56
Low	128 (56)	89 (54)	.71
Pulmonary			
Very High	2 (1)	4 (2)	.24 <sup>5</sup>
High	26 (11)	23 (14)	.44
Medium	27 (12)	15 (9)	.39
Low	125 (55)	80 (49)	.24
Renal			
Very High	2 (1)	2 (1)	.36 <sup>5</sup>
Medium	71 (31)	62 (38)	.17
Low	34 (15)	22 (13)	.68
Skeletal			
Medium	3 (1)	9 (5)	.03 <sup>4,5</sup>
Low	26 (11)	26 (16)	.20
Very Low	62 (27)	50 (30)	.48
Extra Low	64 (28)	40 (24)	.42
Skin			
High	0 (0)	1 (1)	.42 <sup>5</sup>
Low	23 (10)	21 (13)	.40
Very Low	78 (34)	47 (29)	.24
Substance Abuse			
Low	86 (38)	68 (41)	.45
Very Low	34 (15)	27 (16)	.68

<sup>1</sup> See Appendix A2 for information regarding CDPS categories

<sup>2</sup> CDPS categories are not mutually exclusive

<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom) = 1

<sup>4</sup> Denotes significance at  $p < 0.05$

<sup>5</sup> p value calculated using Fisher's exact test

**Table 7. Medicaid prescription categories A-H<sup>1</sup> by assessment status for the period February 2008 through January 2009, n = 392**

Medicaid Rx Category <sup>2</sup>	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3,4</sup>
	n (%)	n (%)	
Alcoholism	0 (0)	2 (1)	.17 <sup>5</sup>
Alzheimer's	2 (1)	4 (2)	.24 <sup>5</sup>
Anti-Coagulants	26 (11)	24 (15)	.34
Asthma/ Chronic Obstructive Pulmonary Disease (COPD)	122 (54)	71 (43)	.046 <sup>4</sup>
Attention Deficit	11 (5)	4 (2)	.29 <sup>5</sup>
Burns	6 (3)	8 (5)	.24
Cardiac	176 (77)	123 (75)	.61
Cystic Fibrosis	5 (2)	1 (1)	.41 <sup>5</sup>
Depression/ Anxiety	203 (89)	140 (85)	.28
Diabetes	88 (39)	47 (29)	.041 <sup>4</sup>
Ears, Eyes, Nose and Throat (EENT)	76 (33)	55 (34)	.97
End Stage Renal Disease (ESRD)/ Renal	27 (12)	25 (15)	.33
Folate Deficiency	21 (9)	16 (10)	.86
Gallstones	0 (0)	0 (0)	n/a
Gastric Acid Disorder	165 (72)	100 (61)	.017 <sup>4</sup>
Glaucoma	5 (2)	4 (2)	.87 <sup>5</sup>
Gout	12 (5)	6 (4)	.45
Growth Hormone	0 (0)	0 (0)	n/a
Hemophilia/ von Willebrand Disease	0 (0)	0 (0)	n/a
Hepatitis	3 (1)	4 (2)	.46 <sup>5</sup>
Herpes	10 (4)	6 (4)	.72
HIV	0 (0)	0 (0)	n/a
Hyperlipidemia	85 (37)	56 (34)	.52

<sup>1</sup> See Appendix A2 for information regarding Medicaid Rx categories

<sup>2</sup> Medicaid Rx categories are not mutually exclusive

<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom) = 1.

<sup>4</sup> Denotes significance at  $p < 0.05$

<sup>5</sup> p value calculated using Fisher's exact test

<sup>6</sup> n/a = not applicable



**Table 8. Medicaid prescription categories I-Z<sup>1</sup> by assessment status for the period February 2008 through January 2009, n = 392**

Medicaid Rx Category <sup>2</sup>	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3,4</sup>
	n (%)	n (%)	
Infections, High	9 (4)	8 (5)	.66
Infections, Medium	115 (50)	102 (62)	.021 <sup>4</sup>
Infections, Low	173 (76)	131 (80)	.35
Inflammatory/ Autoimmune	79 (35)	49 (30)	.32
Insomnia	38 (17)	12 (7)	.006 <sup>4</sup>
Iron Deficiency	36 (16)	22 (13)	.51
Irrigating Solution	1 (< 1)	8 (5)	.005 <sup>4,5</sup>
Liver Disease	17 (7)	11 (7)	.78
Malignancies	9 (4)	6 (4)	.88
Multiple Sclerosis/ Paralysis	85 (37)	57 (35)	.61
Nausea	73 (32)	48 (29)	.56
Neurogenic Bladder	24 (11)	22 (13)	.38
Osteoporosis/ Pagets	11 (5)	17 (10)	.036 <sup>4</sup>
Pain	187 (82)	136 (83)	.82
Parkinsons/ Tremor	25 (11)	15 (9)	.56
PCP Pneumonia	5 (2)	4 (2)	.87 <sup>5</sup>
Psychotic Illness/ Bipolar	96 (42)	53 (32)	.049 <sup>4</sup>
Replacement Solution	66 (29)	48 (29)	.95
Seizure Disorders	122 (54)	74 (45)	.10
Thyroid Disorder	26 (11)	13 (8)	.26
Transplant	4 (2)	1 (1)	.41 <sup>5</sup>
Tuberculosis	9 (4)	2 (1)	.13 <sup>5</sup>

<sup>1</sup> See Appendix A2 for information regarding Medicaid Rx categories

<sup>2</sup> Medicaid Rx categories are not mutually exclusive

<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom) = 1.

<sup>4</sup> Denotes significance at p < 0.05

<sup>5</sup> p value calculated using Fisher's exact test

**Table 9. Service utilization during baseline<sup>1</sup> by assessment status, n = 392**

Service Utilization Type	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3,4</sup>
	n (%) <sup>2</sup>	n (%) <sup>2</sup>	
Aging and Disability Services			
Utilized	80 (35)	35 (21)	.003 <sup>4</sup>
Did not utilize	148 (65)	129 (79)	
Alcohol or Drug Treatment			
Utilized	44 (19)	38 (23)	.35
Did not utilize	184 (81)	126 (77)	
Emergency Room Services <sup>5</sup>			
Utilized	141 (62)	90 (55)	.17
Did not utilize	87 (38)	74 (45)	
Number of ER visits:			
All Clients <sup>5</sup>			
Mean (SD)	2.10 (3.78)	3.26 (8.22)	.21 <sup>6</sup>
Median	1	1	
Minimum	0	0	
Maximum	31	80	
Number of ER visits:			
Clients with Utilization <sup>5</sup>			
Number of Clients	141	90	.93 <sup>6</sup>
Mean (SD)	5.28 (9.94)	3.82 (4.41)	
Median	2	2	
Minimum	1	1	
Maximum	31	80	
Inpatient hospital services			
Utilized	90 (39)	77 (47)	.14
Did not utilize	138 (61)	87 (53)	

<sup>1</sup> February 2008 through January 2009<sup>2</sup> Percentages may not sum to 100 due to rounding<sup>3</sup> p value calculated using chi-square test unless noted; df (degrees of freedom)<sup>4</sup> Denotes significance at  $p < 0.05$ <sup>5</sup> Emergency room utilization is based on visits classified as the following: Non-Emergent, Emergent: Primary Care Treatable, Emergent: ED Needed and Preventable or Avoidable, Emergent: ED Needed and Not Preventable or Avoidable. See Appendix A3 for more information.<sup>6</sup> p value calculated using Wilcoxon-Mann-Whitney test

**Table 10. Emergency room (ER) utilization per member per month<sup>1</sup> during baseline<sup>2</sup> by assessment status, n = 392**

Type of Emergency <sup>3</sup>	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>4</sup>
Non-Emergent			
Mean (SD)	0.09 (0.23)	0.05 (0.10)	
Median	0.00	0.00	.13
Minimum	0.00	0.00	
Maximum	2.22	0.95	
Emergent, Primary Care Treatable			
Mean (SD)	0.10 (0.27)	0.06 (0.14)	
Median	0.02	0.01	.17
Minimum	0.00	0.00	
Maximum	2.05	1.45	
Emergent, ED Care Needed, Preventable or Avoidable			
Mean (SD)	0.03 (0.13)	0.02 (0.07)	
Median	0.00	0.00	.74
Minimum	0.00	0.00	
Maximum	1.87	0.56	
Emergent, ED Care Needed, Not Preventable or Avoidable			
Mean (SD)	0.06 (0.16)	0.05 (0.10)	
Median	0.01	0.00	.66
Minimum	0.00	0.00	
Maximum	1.17	1.01	

<sup>1</sup> Per member per month is the sum of utilization during baseline while the client was eligible for Medicaid, divided by the number of months on Medicaid during baseline

<sup>2</sup> February 2008 through January 2009

<sup>3</sup> Emergency types are based on whether the following factors indicated that immediate medical care was required within 12 hours: client age, client medical history, client vital signs, client's initial complaint, procedures and resources used in the ER, and discharge diagnosis. See Appendix A3 for additional information.

<sup>4</sup> p value calculated using Wilcoxon-Mann-Whitney test

**Table 11. Emergency room (ER) utilization per member per month<sup>1</sup> during baseline<sup>2</sup> by diagnosis category and assessment status, n = 392**

Diagnosis Categories <sup>3</sup>	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>4</sup>
Alcohol-related diagnoses			
Mean (SD)	0.01 (0.07)	0.02 (0.13)	
Median	0.00	0.00	.65
Minimum	0.00	0.00	
Maximum	0.92	1.33	
Drug-related diagnoses			
Mean (SD)	0.00 (0.01)	0.00 (0.01)	
Median	0.00	0.00	.94
Minimum	0.00	0.00	
Maximum	0.08	0.08	
Injury diagnoses			
Mean (SD)	0.04 (0.11)	0.05 (0.11)	
Median	0.00	0.00	.74
Minimum	0.00	0.00	
Maximum	1.08	0.83	
Mental health diagnoses			
Mean (SD)	0.01 (0.06)	0.02 (0.05)	
Median	0.00	0.00	.93
Minimum	0.00	0.00	
Maximum	0.42	0.33	
Other diagnoses			
Mean (SD)	0.05 (0.13)	0.07 (0.14)	
Median	0.00	0.00	.011 <sup>5</sup>
Minimum	0.00	0.00	
Maximum	1.08	1.08	

<sup>1</sup> Per member per month is the sum of utilization during baseline while the client was eligible for Medicaid, divided by the number of months on Medicaid during baseline

<sup>2</sup> February 2008 through January 2009

<sup>3</sup> Diagnosis categories are based on the primary diagnosis of the ER visit. See appendix A3 for additional information.

<sup>4</sup> p value calculated using Wilcoxon-Mann-Whitney test

<sup>5</sup> Denotes significance at  $p < 0.05$

**Table 12. Inpatient utilization costs (\$) per member per month<sup>1</sup> during baseline<sup>2</sup> by admission type and assessment status, n = 392**

Admission Type	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3,4</sup>
All Inpatient Admissions			
Mean (SD)	671.15 (1,599.06)	1,062.71 (2,187.73)	
Median	0.00	0.00	.035 <sup>4</sup>
Minimum	0.00	0.00	
Maximum	15,616.35	16,373.45	
Inpatient Admissions with Emergency Room Activity			
Mean (SD)	518.84 (1,521.96)	714.94 (1,517.93)	
Median	0.00	0.00	.01 <sup>4</sup>
Minimum	0.00	0.00	
Maximum	15,616.35	11,091.69	
Inpatient Admissions without Emergency Room Activity			
Mean (SD)	152.31 (481.40)	347.77 (1,373.11)	
Median	0.00	0.00	.61
Minimum	0.00	0.00	
Maximum	3,889.46	12,461.78	

<sup>1</sup> Per member per month is the sum of utilization during baseline while the client was eligible for Medicaid, divided by the number of months on Medicaid during baseline

<sup>2</sup> February 2008 through January 2009

<sup>3</sup> p value calculated using Wilcoxon-Mann-Whitney test

<sup>4</sup> Denotes significance at  $p < 0.05$

**Table 13. Aging and Disability Services Administration (ADSA) utilization costs (\$) per member per month<sup>1</sup> during baseline<sup>2</sup> by type of AAS service and assessment status, n = 392**

ADSA Service Type	Assessed (n = 228)	Not Assessed (n = 164)	p Value <sup>3,4</sup>
In Home Services			
Mean (SD)	384.95 (801.56)	204.51 (636.18)	
Median	0.00	0.00	.007 <sup>4</sup>
Minimum	0.00	0.00	
Maximum	4,617.46	3,718.44	
Community Residential Services			
Mean (SD)	120.63 (457.77)	68.87 (323.63)	
Median	0.00	0.00	.32
Minimum	0.00	0.00	
Maximum	2,890.31	2,109.72	

<sup>1</sup> Per member per month is the sum of utilization during baseline while the client was eligible for Medicaid, divided by the number of months on Medicaid during baseline

<sup>2</sup> February 2008 through January 2009

<sup>3</sup> p value calculated using Wilcoxon-Mann-Whitney test

<sup>4</sup> Denotes significance at  $p < 0.05$

**Table 14. Alcohol or drug treatment (AOD) utilization costs (\$) per member per month<sup>1</sup> during baseline<sup>2</sup> by selected AOD treatment type and assessment status, n = 392**

<i>Selected AOD Treatment Type</i>	<i>Assessed (n = 228)</i>	<i>Not Assessed (n = 164)</i>	<i>p Value<sup>3,4</sup></i>
Any AOD Treatment <sup>5</sup>			
Mean (SD)	44.93 (116.61)	58.91 (147.67)	.36
Median	0.00	0.00	
Minimum	0.00	0.00	
Maximum	640.47	693.64	
AOD Treatment: Case Management			
Mean (SD)	0.54 (2.55)	0.55 (2.85)	.61
Median	0.00	0.00	
Minimum	0.00	0.00	
Maximum	25.81	28.11	
AOD Treatment: Inpatient (Residential)			
Mean (SD)	2.21 (26.71)	12.99 (72.49)	.03 <sup>4</sup>
Median	0.00	0.00	
Minimum	0.00	0.00	
Maximum	396.33	614.39	
AOD Treatment: Opiate Substitution			
Mean (SD)	27.90 (95.56)	35.05 (115.75)	.89
Median	0.00	0.00	
Minimum	0.00	0.00	
Maximum	387.01	693.64	
AOD Treatment: Outpatient			
Mean (SD)	14.27 (64.40)	10.31 (43.71)	.34
Median	0.00	0.00	
Minimum	0.00	0.00	
Maximum	633.45	464.17	

<sup>1</sup> Per member per month is the sum of utilization during baseline while the client was eligible for Medicaid, divided by the number of months on Medicaid during baseline

<sup>2</sup> February 2008 through January 2009

<sup>3</sup> p value calculated using Wilcoxon-Mann-Whitney test

<sup>4</sup> Denotes significance at  $p < 0.05$

<sup>5</sup> Any AOD treatment refers to costs associated with case management, inpatient (residential) treatment, opiate substitution treatment, and outpatient treatment

**Table 15. Health Services and Resource Administration (HRSA) reimbursement costs (\$) per member per month<sup>1</sup> during baseline<sup>2</sup> by assessment status, n = 392**

<i>HRSA Reimbursement<sup>3</sup></i>	<i>Assessed (n = 228)</i>	<i>Not Assessed (n = 164)</i>	<i>p Value<sup>4</sup></i>
Claim Based Reimbursement			
Mean (SD)	1,868.02 (2,089.99)	2,307.75 (2,712.61)	
Median	1,154.22	1,392.65	.10
Minimum	118.85	14.25	
Maximum	18,033.72	19,102.41	

<sup>1</sup> Per member per month is the sum of utilization during baseline while the client was eligible for Medicaid, divided by the number of months on Medicaid during baseline

<sup>2</sup> February 2008 through January 2009

<sup>3</sup> HRSA reimbursements refer to funds paid to providers by the Medical Assistance Administration (MAA). The reimbursements were based on claims the providers filed about client medical service utilization. MAA reimbursement costs do not include prescription rebates, certified public expenditures, or other similar costs.

<sup>4</sup> p value calculated using Wilcoxon-Mann-Whitney test

**Table 16. Number of narcotic prescriptions during baseline<sup>1</sup> by assessment status, n = 392**

<i>Prescription Type</i>	<i>Assessed (n = 228)</i>	<i>Not Assessed (n = 164)</i>	<i>p Value<sup>2</sup></i>
Narcotic			
Mean (SD)	11 (17)	10 (18)	
Median	4.5	2	.31
Minimum	0	0	
Maximum	130	132	

<sup>1</sup> February 2008 through January 2009

<sup>2</sup> p value calculated using Wilcoxon-Mann-Whitney



## Appendix A1: References for Mental Health Disorders and Medical Risk Score Definition

### Mental Health Disorders

*From Client Outcomes Database Data Dictionary (Mental Illness Summary Tab):*

Grouping Name	ICD-9-CM Codes for MI Dx
Adjustment & Stress	300.0' - '300.09' , '300.1' - '300.19' , '308' - '308.99' , '309' - '309.99'
Depression	296.2' - '296.29' , '296.3' - '296.39' , '298.0' - '298.09' , '300.4' - '300.49' , '311' - '311.99'
Mania and Bipolar	296.0' - '296.19' , '296.4' - '296.99' , '298.1' - '298.19'
Neurotic, Personality and Childhood Psychiatric	300.2' - '300.39' , '300.5' - '300.99' , '301' - '301.99' , '302' - '302.99' , '307' - '307.99' , '312' - '312.99' , '313' - '313.99' , '314.0' - '314.09' , '314.2' - '314.99'
Psychotic	295' - '295.99' , '297' - '297.99' , '298.2' - '298.99' , '299' - '299.99'

### Medical Risk Score

Estee, S., Wickizer, T., He, L., Ford Shah, M., & Mancuso, D. (2010). Evaluation of the Washington State Screening, Brief Intervention, and Referral to Treatment Project. *Medical Care*, 48, 18-24.

## Appendix A2: References for Chronic Illness and Disability Payment System (CDPS) and Medicaid Rx (MRX) Risk Categories

### CDPS

Kronick, R., Gilmer, T., Dreyfus, T., & Lee, L. (2000). Improving health-based payment for Medicaid beneficiaries: CDPS. *Health Care Financing Review*, 21, 29-64.

*From Client Outcomes Database Data Dictionary:*

Variable	CDPS Binary Indicator	SAMPLE DIAGNOSES
CANH	Cancer, high	Lung cancer, ovarian cancer, secondary malignant neoplasms
CANM	Cancer, medium	Mouth, breast or brain cancer, malignant melanoma
CANL	Cancer, low	Colon, cervical, or prostate cancer, carcinomas in situ
CARVH	Cardiovascular, very high	Heart transplant status/complications
CARM	Cardiovascular, medium	Congestive heart failure, cardiomyopathy
CARL	Cardiovascular, low	Endocardial disease, myocardial infarction, angina
CAREL	Cardiovascular, extra low	Hypertension
CERL	Cerebrovascular, low	Intracerebral hemorrhage, precerebral occlusion
CNSH	CNS, high	Quadriplegia, amyotrophic lateral sclerosis
CNSM	CNS, medium	Paraplegia, muscular dystrophy, multiple sclerosis
CNSL	CNS, low	Epilepsy, Parkinson's disease, cerebral palsy, migraine
DDM	DD, medium	Severe or profound mental retardation
DDL	DD, low	Mild or moderate mental retardation, Down's syndrome
DIA1H	Diabetes, type 1 high	Type 1 diabetes with renal manifestations/coma
DIA1M	Diabetes, type 1 medium	Type 1 diabetes without complications
DIA2M	Diabetes, type 2 medium	Type 2 or unspecified diabetes with complications
DIA2L	Diabetes, type 2 low	Type 2 or unspecified diabetes w/out complications
EYEL	Eye, low	Retinal detachment, choroidal disorders
EYEVH	Eye, very low	Cataract, glaucoma, congenital eye anomaly
GENEL	Genital, extra low	Uterine and pelvic inflammatory disease, endometriosis
GIH	Gastro, high	Peritonitis, hepatic coma, liver transplant
GIM	Gastro, medium	Regional enteritis and ulcerative colitis, enterostomy
GIL	Gastro, low	Ulcer, hernia, GI hemorrhage, intestinal infectious disease
HEMEH	Hematological, extra high	Hemophilia
HEMVH	Hematological, very high	Hemoglobin-S sickle-cell disease
HEMM	Hematological, medium	Other hereditary hemolytic anemias, aplastic anemia
HEML	Hematological, low	Other white blood cell disorders, other coagulation defects
AIDSH	AIDS, high	AIDS, pneumocystis pneumonia, cryptococcosis
HIVM	HIV, medium	Asymptomatic HIV infection
INFH	Infectious, high	Staphylococcal or pseudomonas septicemia
INFM	Infectious, medium	Other septicemia, pulmonary or disseminated candida
INFL	Infectious, low	Poliomyelitis, oral candida, herpes zoster
METH	Metabolic, high	Panhypopituitarism, pituitary dwarfism
METM	Metabolic, medium	Kwashiorkor, marasmus, and other malnutrition, parathyroid
METVL	Metabolic, very low	Other pituitary disorders, gout
PSYH	Psychiatric, high	Schizophrenia
PSYM	Psychiatric, medium	Bipolar affective disorder
PSYL	Psychiatric, low	Other depression, panic disorder, phobic disorder
PULVH	Pulmonary, very high	Cystic fibrosis, lung transplant, tracheostomy status
PULH	Pulmonary, high	Respiratory arrest or failure, primary pulmonary hypertension
PULM	Pulmonary, medium	Other bacterial pneumonias, chronic obstructive asthma
PULL	Pulmonary, low	Viral pneumonias, chronic bronchitis, asthma, COPD
RENVH	Renal, very high	Chronic renal failure, kidney transplant status/complications
RENM	Renal, medium	Acute renal failure, chronic nephritis, urinary incontinence
RENH	Renal, low	Kidney infection, kidney stones, hematuria, urethral stricture
SKCM	Skeletal, medium	Chronic osteomyelitis, aseptic necrosis of bone
SKCL	Skeletal, low	Rheumatoid arthritis, osteomyelitis, systemic lupus

SKCVL	Skeletal, very low	Osteoporosis, musculoskeletal anomalies
SKCEL	Skeletal, extra low	Osteoarthritis, skull fractures, other disc disorders
SKNH	Skin, high	Decubitus ulcer
SKNL	Skin, low	Other chronic ulcer of skin
SKNVL	Skin, very low	Cellulitis, burn, lupus erythematosus
SUBL	Substance abuse, low	Drug abuse, dependence, or psychosis
SUBVL	Substance abuse, very low	Alcohol abuse, dependence, or psychosis

## MRX

Gilmer, T., Kronick, R., Fishman, P., & Ganiats, T.G. (2001). The Medicaid Rx model: pharmacy-based risk adjustment for public programs. *Medical Care*, 39, 1188-1202.

*From Client Outcomes Database Data Dictionary:*

Variable	PHARMACY Binary Indicator	SUMMARY DRUG DESCRIPTIONS
MRX1	Alcoholism	Disulfiram
MRX2	Alzheimers	Tacrine
MRX3	Anti-coagulants	Heparins
MRX4	Asthma/COPD	Inhaled glucocorticoids, bronchodilators
MRX5	Attention Deficit	Methylphenidate, CNS stimulants
MRX6	Burns	Silver Sulfadiazine
MRX7	Cardiac	Ace inhibitors, beta blockers, nitrates, digitalis, vasodilators
MRX8	Cystic Fibrosis	Pancrelipase
MRX9	Depression/Anxiety	Antidepressants, antianxiety
MRX10	Diabetes	Insulin, sulfonylureas
MRX11	EENT	Anti-infectives for EENT related conditions
MRX12	ESRD/Renal	Erythropoietin, Calcitriol
MRX13	Folate Deficiency	Folic acid
MRX14	Gallstones	Ursodiol
MRX15	Gastric Acid Disorder	Cimetidine
MRX16	Glaucoma	Carbonic anhydrase inhibitors
MRX17	Gout	Colchicine, Allopurinol
MRX18	Growth Hormone	Growth hormones
MRX19	Hemophilia/von Willebrands	Factor IX concentrates
MRX20	Hepatitis	Interferon beta
MRX21	Herpes	Acyclovir
MRX22	HIV	Antiretrovirals
MRX23	Hyperlipidemia	Antihyperlipidemics
MRX24	Infections, high	Aminoglycosides
MRX25	Infections, medium	Vancomycin, Fluoroquinolones
MRX26	Infections, low	Cephalosporins, Erythromycins
MRX27	Inflammatory/Autoimmune	Glucocorticosteroids
MRX28	Insomnia	Sedatives, Hypnotics
MRX29	Iron Deficiency	Iron
MRX30	Irrigating solution	Sodium chloride
MRX31	Liver Disease	Lactulose
MRX32	Malignancies	Antineoplastics
MRX33	Multiple Sclerosis/Paralysis	Baclofen
MRX34	Nausea	Antiemetics
MRX35	Neurogenic bladder	Oxybutin
MRX36	Osteoporosis/Pagets	Etidronate/calcium regulators
MRX37	Pain	Narcotics
MRX38	Parkinsons/Tremor	Benzotropine, Trihexyphenidyl
MRX39	PCP Pneumonia	Pentamidine, Atovaquone
MRX40	Psychotic Illness/Bipolar	Antipsychotics, lithium
MRX41	Replacement solution	Potassium chloride
MRX42	Seizure disorders	Anticonvulsants
MRX43	Thyroid Disorder	Thyroid hormones
MRX44	Transplant	Immunosuppressive agents
MRX45	Tuberculosis	Rifampin

### **Appendix A3: References for Emergency Room Utilization Categories**

- Billings, J., Parikh, N. & Mijanovich, T. (2000, November). Emergency department use in New York City: A substitute for primary care? New York: The Commonwealth Fund.
- Billings, J., Parikh, N. & Mijanovich, T. (2000, November). Emergency room use: The New York story. New York: The Commonwealth Fund.
- Nordlund, D., Mancuso, D., & Felver, B. (2004). *Chemical Dependency Treatment Reduces Emergency Room Costs and Visits*. (11.120fs). Olympia, WA: Washington State Department of Social and Health Services, Research and Data Analysis Division.

## Appendix B: King County Care Partners Assessment



*RN Care Management Assessment*  
Paper Version

Patient Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
Assmt Date: \_\_\_\_\_

### Barrier to Self Care – Basic Need/Social Supports

1. What is your living situation?

☐ Own home   ☐ Renting (apt, house, room)   ☐ Staying (w/friends, family, shelter, car, motel, other)

2. Who lives with you?

☐ Alone   ☐ Spouse/Partner   ☐ Daughter/Son   ☐ Grandchildren  
☐ Parents   ☐ Friends

3. Are you concerned about your housing situation?

☐ Yes   ☐ No

4. Do you have dependable transportation for medical appointments or other activities?

☐ Yes   ☐ No

5. Is there someone you can count on to help if you need it?

☐ Yes: Name \_\_\_\_\_ Phone \_\_\_\_\_ Relationship \_\_\_\_\_  
☐ No

6. Are there religious or cultural practices in your life that you would like us to know about to help us serve you better?

☐ Yes   ☐ No

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Barrier to Self Care – Nutrition

1. Are you on Food Stamps?

☐ Yes   ☐ No

2. Do you have concerns about food, eating, weight?

☐ Yes   ☐ No

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



3. In the last month, did you ever cut the size of your meals or skip meals because there was not enough money for food?

☐ Yes ☐ No

Height: \_\_\_\_\_

Weight: \_\_\_\_\_

Food Allergies: \_\_\_\_\_

### Barrier to Self Care – Domestic Violence

1. Do you worry about somebody mistreating you?

☐ Yes ☐ No

2. Are you afraid of your partner, a family member, friend, or roommate?

☐ Yes ☐ No

3. Has he/she ever put you down, said hurtful things, or threatened you?

☐ Yes ☐ No

4. Has he/she ever threatened or forced you to have sexual contact?

☐ Yes ☐ No

Comments: \_\_\_\_\_

### Barrier to Self Care – Activities of Daily Living

I would like to ask you about some activities of daily living, things that we need to do part of our daily lives. I would like to know if you can do these activities without any help at all, with some help, or if you can't do them at all.

1. Can you use the telephone?

☐ Without help ☐ With some help ☐ Unable

2. Can you get to places out of walking distances?

☐ Without help ☐ With some help ☐ Unable

3. Can you go shopping for groceries or clothes (assuming transportation)?

☐ Without help ☐ With some help ☐ Unable



4. Can you prepare your own meals?  
☐ Without help      ☐ With some help      ☐ Unable

5. Can you do your housework?  
☐ Without help      ☐ With some help      ☐ Unable

6. Can you take your own medicine?  
☐ Without help      ☐ With some help      ☐ Unable

7. Can you handle your own money?  
☐ Without help      ☐ With some help      ☐ Unable

Comments: \_\_\_\_\_  
\_\_\_\_\_

**\*Patient Activation Measure (PAM) 13**

Below are some statements that people sometimes make when they talk about their health. Please indicate how much you agree or disagree with each statement as it applies to you personally by circling your answer. Your answers should be what is true for you and not just what you think the doctor wants you to say. If the statement does not apply to you, circle N/A.

1. When all is said and done, I am the person who is responsible for taking care of my health

☐ Disagree Strongly    ☐ Disagree    ☐ Agree    ☐ Agree Strongly    ☐ N/A

2. Taking an active role in my own health care is the most important thing that affects my health

☐ Disagree Strongly    ☐ Disagree    ☐ Agree    ☐ Agree Strongly    ☐ N/A

3. I am confident I can help prevent or reduce problems associated with my health condition

☐ Disagree Strongly    ☐ Disagree    ☐ Agree    ☐ Agree Strongly    ☐ N/A

4. I know what each of my prescribed medications

☐ Disagree Strongly    ☐ Disagree    ☐ Agree    ☐ Agree Strongly    ☐ N/A

5. I am confident that I can tell whether I need to go to the doctor or whether I can take care of a health problem myself.

☐ Disagree Strongly    ☐ Disagree    ☐ Agree    ☐ Agree Strongly    ☐ N/A



6. I am confident that I can tell a doctor concerns I have even when he or she does not ask.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

7. I am confident that I can follow through on medical treatments I may need to do at home.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

8. I understand my health problems and what causes them.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

9. I know what treatments are available for my health problems.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

10. I have been able to maintain (keep up with) lifestyle changes, like eating right or exercising.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

11. I know how to prevent further problems with my health condition.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

12. I am confident I can figure out solutions when new problems arise with my health condition.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

13. I am confident that I can maintain lifestyle changes, like eating right and exercising, even during times of stress.

☐ Disagree Strongly ☐ Disagree ☐ Agree ☐ Agree Strongly ☐ N/A

**\*Pain**

1. Which of the following pain problems have you had in the past 3 months that have been bothersome and present at least several days? (check all that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Back Pain                                      | <input type="checkbox"/> Neck Pain                       |
| <input type="checkbox"/> Headache or Migraine                           | <input type="checkbox"/> Stomach ache or abdominal pain  |
| <input type="checkbox"/> Pelvic pain, groin pain or painful prostatitis | <input type="checkbox"/> Pain in your shoulders          |
| <input type="checkbox"/> Pain in your hands or arms                     | <input type="checkbox"/> Pain in your hips               |
| <input type="checkbox"/> Pain in your legs, feet, or knees              | <input type="checkbox"/> Chest pain                      |
| <input type="checkbox"/> Facial ache or pain, TMD, TMJ                  | <input type="checkbox"/> Widespread pain or fibromyalgia |
| <input type="checkbox"/> Other: _____                                   | <input type="checkbox"/> None of the above               |

2. How would you rate your pain on a 0 to 10 scale at present time, that is RIGHT NOW, where 0 is “no pain” and 10 is “pain as bad as could be”?

NO PAIN

PAIN AS BAD AS  
COULD BE

0 1 2 3 4 5 6 7 8 9 10

3. In the past 3 months, ON AVERAGE, how intense was your pain rated on a 0 to 10 scale where 0 is “no pain” and 10 is “pain as bad as could be”? (That is, your usual pain at times you were experiencing pain)

NO PAIN

PAIN AS BAD AS  
COULD BE

0 1 2 3 4 5 6 7 8 9 10

4. In the past 3 months, how much as pain interfered with your daily activities rated on a 0 to 10 scale where 0 is “no interference” and 10 is “unable to carry on any activities”?

NO  
INTERFERENCE

UNABLE TO CARRY  
ON ANY ACTIVITIES

0 1 2 3 4 5 6 7 8 9 10

5. In the past 3 months, how much as pain interfered with your ability to take part in recreational, social, and family activities where 0 is “no interference” and 10 is “unable to carry on any activities”?

NO  
INTERFERENCE

UNABLE TO CARRY  
ON ANY ACTIVITIES

0 1 2 3 4 5 6 7 8 9 10

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Health Literacy

1. How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always



**\*Depression Screen**

In the past month, have you ever been bothered by:

Little interest or pleasure in doing things? ☐ Yes ☐ No

Feeling down, depressed, or hopeless? ☐ Yes ☐ No

*If yes to any of the above, proceed to PHQ 9 questions*

0 1 2 3

PHQ 9 Questions Over the last 2 weeks, how often have you been bothered by any of the following?	Not at all	3-6 days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things.				
2. Feeling down, sad, or hopeless.				
3. Trouble falling or staying asleep, or sleeping too much.				
4. Feeling tired or having little energy.				
5. Poor appetite or overeating.				
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down.				
7. Trouble concentrating on things, such as reading the newspaper or watching television.				
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.				
9. Thoughts that you would be better off dead or of hurting yourself in some way.				

**Scoring Information:**

Minor depression = 2 to 4 symptoms with a score of 2 or 3, with at least one of them being a cardinal symptom (Q1 and Q2); Major depression = same as above, but 5 or more symptoms total in the 2 to 3 category.

## PTSD

Many people have experienced traumatic events in their lives, like being the victim of a violent crime or assault, or living through a fire, flood, or earthquake, or being injured in an accident, or being the victim of abuse in childhood. Please think about the most stressful traumatic event you have experienced, and for each item, I would like you to tell me how bothered you have been by these experiences *in the past month*.

1. Repeated, disturbing memories, thoughts, or images of a traumatic event that has happened to you in the past

☐ Not at all    ☐ A little bit    ☐ Moderately    ☐ Quite a bit    ☐ Extremely

2. Feeling very upset when something reminded you of the event?

☐ Not at all    ☐ A little bit    ☐ Moderately    ☐ Quite a bit    ☐ Extremely

3. Avoiding activities or situations because they reminded you of the event?

☐ Not at all    ☐ A little bit    ☐ Moderately    ☐ Quite a bit    ☐ Extremely

4. Feeling distant or cut off from other people?

☐ Not at all    ☐ A little bit    ☐ Moderately    ☐ Quite a bit    ☐ Extremely

5. Feeling irritable or having angry outbursts?

☐ Not at all    ☐ A little bit    ☐ Moderately    ☐ Quite a bit    ☐ Extremely

6. Having difficulty concentrating?

☐ Not at all    ☐ A little bit    ☐ Moderately    ☐ Quite a bit    ☐ Extremely

## Overall Anxiety Severity and Impairment Scale (OASIS)

1. In the past week, how often have you felt anxious?

- ☐ *No* anxiety in the past week.  
☐ *Infrequent* anxiety. Felt anxious a few times.  
☐ *Occasional* anxiety. Felt anxious as much of the time as not. It was hard to relax.  
☐ *Frequent* anxiety. Felt anxious most of the time. It was very difficult to relax.  
☐ *Constant* anxiety. Felt anxious all of the time and never really relaxed.

2. In the past week, when you have felt anxious, how intense or severe was your anxiety?

- ☐ *Little or none*: anxiety was absent or barely noticeable.  
☐ *Mild*: Anxiety was at a low level. It was possible to relax when I tried. Physical symptoms were only slightly uncomfortable.  
☐ *Moderate*: Anxiety was distressing at times. It was hard to relax or concentrate, but I could do it if I tried. Physical symptoms were uncomfortable.



- ☐ *Severe:* Anxiety was intense much of the time. It was very difficult to relax or focus on anything else. Physical symptoms were extremely uncomfortable.
- ☐ *Extreme:* Anxiety was overwhelming. It was impossible to relax at all. Physical symptoms were unbearable.

3. In the past week, how often did you avoid situations, places, objects, or activities because of anxiety or fear?

- ☐ *None:* I do not avoid places, situations, activities, or things because of fear.
- ☐ *Infrequent:* I avoid something once in a while, but will usually face the situation or confront the object. My lifestyle is not affected.
- ☐ *Occasional:* I have some fear of certain situations, places, or objects, but it is still manageable. My lifestyle has only changed in minor ways. I almost always avoid the things I fear when I'm alone, but can handle them if someone comes with me.
- ☐ *Frequent:* I have considerable fear and really try to avoid the things that frighten me. I have made significant changes in my lifestyle to avoid the object, situation, activity, or place.
- ☐ *All the time:* Avoiding objects, situations, activities, or places has taken over my life. My lifestyle has been extensively affected and I no longer do things that I used to enjoy.

4. In the past week, how much did your anxiety interfere with your ability to do the things you needed to do at work, at school, or at home?

- ☐ *None:* No interference at work/home/school from anxiety.
- ☐ *Mild:* My anxiety has caused some interference at work/home/school. Things are more difficult, but everything that needs to be done is still getting done.
- ☐ *Moderate:* My anxiety definitely interferes with tasks. Most things are still getting done, but few things are being done as well as in the past.
- ☐ *Severe:* My anxiety has really changed my ability to get things done. Some tasks are still being done, but many things are not. My performance has suffered.
- ☐ *Extreme:* My anxiety has become incapacitating. I am unable to complete tasks and have had to leave school, have quit or been fired from my job, or have been unable to complete tasks at home and have faced consequences like bill collectors, eviction, etc.

5. In the past week, how much has anxiety interfered with your social life and relationships?

- ☐ *None:* My anxiety doesn't affect my relationships.
- ☐ *Mild:* My anxiety slightly interferes with my relationships. Some of my friendships and other relationships have suffered, but overall my social life is fulfilling.

- ☐ *Moderate:* I have experienced some interference with my social life, but I still have a few close relationships. I don't spend as much time with others as in the past, but I still socialize sometimes.
- ☐ *Severe:* My friendships and other relationships have suffered a lot because of anxiety. I do not enjoy social activities. I socialize very little.
- ☐ *Extreme:* My anxiety has completely disrupted my social activities. All of my relationships have suffered or ended. My family life is extremely strained.

### Alcohol and Substance Use

- How often have you had a drink containing alcohol in the last year? Consider a "drink" to be a can or bottle of beer, a glass of wine, a wine cooler, or one cocktail or shot of hard liquor (like scotch, gin, vodka).  
☐ Never    ☐ Monthly or less    ☐ 2-4x/mo    ☐ 2-3x/wk    ☐ >4 days/wk
- How many drinks containing alcohol did you have on a typical day when you were drinking in the last year?  
☐ I do not drink    ☐ 1-2 drinks a day    ☐ 3-4 drinks    ☐ 5-6 drinks  
☐ 7-9 drinks    ☐ 10 or more
- How often in the last year have you had 6 or more drinks on one occasion?  
☐ Never    ☐ Less than monthly    ☐ Monthly    ☐ Weekly    ☐ Daily
- Are you presently using any street or illegal drugs, misusing prescribed medications, glue, or inhalants?  
☐ Yes    ☐ No

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Tobacco Use

- Have you ever use tobacco? ☐ Yes    ☐ No
- Do you use tobacco now? ☐ Yes    ☐ No
- If yes, would you like help making a plan to quit ☐ Yes    ☐ No
- If yes, how much do you smoke per day? Pack quantity \_\_\_\_\_



5. If yes, for how many years have you smoked? \_\_\_\_\_

6. Are you exposed to 2<sup>nd</sup> hand smoke? ☐ Yes ☐ No

7. If yes, would you like help making a plan to stop being exposed? ☐ Yes ☐ No

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Health Problems**

Health problem/symptom	Comments	Status



**\*Medications**

I'm going to ask you about the medications that you took over the three days. It is hard to always remember to take pills, especially for those that take several pills each day. Some people don't want to take pills everyday. I would like to understand what is really going on, so don't worry about telling me that you didn't take all your medication doses.

Medication List:

Enter doses missed  
(prescription only)

Name	Dosage	Reasons for taking, Current, Comments	Missed Yesterday	Missed 2 days ago	Missed 3 days ago

2. During the past 3 days, on how many days have you missed all your pills?  
☐ No days    ☐ One day    ☐ Two days    ☐ Three days
3. Medications often need to be taken on a schedule, such as "2 times a day" or in a certain way (e.g. on an empty stomach). How closely did you follow your specific schedule over the last 3 days?  
☐ Never    ☐ Some of the time    ☐ About half the time    ☐ Most of the time  
☐ All of the time
4. Some people find that they forget to take their pills on the weekends. Did you skip any of your medications last weekend – last Saturday or Sunday?  
☐ No    ☐ Yes

Are you allergic to any medications? \_\_\_\_\_





**\*Self Management Goals**

Goal	RN follow-up date	Stage of change
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_